

Unterbeitrag 4:

Individual Differences in Human Fear Generalization and Implications for Anxiety Disorders

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Generalization of conditioned fear is discussed as a crucial mechanism contributing to the development of anxiety disorders. Previous research indicates that anxiety disorders are characterized by an overgeneralization of conditioned fear as compared to healthy participants. However, systematic investigations on the variance in fear generalization are lacking. Therefore, we investigated a large sample of healthy individuals (N = 1175) with the aim to identify distinctive phenotypes of fear generalization. To this end, all participants completed a differential fear conditioning phase followed by a generalization test. By means of cluster analyses based on individual arousal generalization gradients, we identified five reliable and valid subgroups that systematically differed in (1) mean fear response levels, (2) differentiation between conditioned fear and safety, and (3) linearity of the generalization gradients, though mean response levels accounted for the most variance. Remarkably, the patterns of mean and differential responses were already evident during fear acquisition. The subgroups also showed systematic differences among psychometric measures of anxiety traits, with the cluster showing the strongest mean fear response levels and fear generalization also demonstrating the highest levels of anxiety traits. Following a dimensional view of psychopathology, these clusters likely delineate risk factors for anxiety disorders (high mean fear responses levels, low CS-differentiation, strong fear generalization and high levels of anxiety traits). As crucial group characteristics were already evident during fear acquisition, our results emphasize the importance of average fear responses and differentiation between conditioned fear and safety as risk factors for anxiety disorders.

Unterbeitrag 5:

Specific phobia not so specific after all: Evidence for fear generalization in spider and dog phobia

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Fear generalization is thought to be an important mechanism involved in the acquisition and maintenance of specific phobia. Specifically, phobic fears are rarely confined to a clear-cut stimulus or situation, but are observed to spread to similar stimuli and situations. Despite its evident diagnostic and therapeutic relevance, the degree and clinical consequences of fear generalization have not been systematically investigated.

To address this gap, we assessed generalized fear and avoidance in spider- (n=58) and dog-fearful (n=22) individuals online. Participants rated 30 spider (e.g., a tarantula) or dog pictures of which 15 depicted a variety of species of the feared animal. The other 15 pictures showed either physically similar, but different animals (e.g., a centipede), associated locations (e.g., basement) or semantically related stimuli of the same category (spider web). To assess (generalized) avoidance, participants could choose to either view each picture again and win virtual money, or to avoid viewing the stimuli and not receive money. In addition, we assessed phobia symptoms, DSM criteria, and every-day impairment.

Indeed, fear ratings were found to generalize to different animals, associated locations, and semantically related stimuli. Importantly, this fear generalization was highly correlated with phobia symptoms and diagnostic criteria. Impairment in every-day functioning was moderately associated with fear generalization especially in dog-fearful individuals. Although we generally observed low generalized avoidance behavior, avoidance of spider-related animals was linked with diagnostic indicators of spider phobia and impairment in every-day life.

This is the first study to systematically document generalized fear and avoidance in spider- and dog-fearful individuals, as well as clinically relevant associations. We argue for the relevance of fear generalization for symptom severity, as well as for diagnostic and therapeutic procedures.